



Encontro Nacional
de Produtores e Usuários
de Informações Sociais,
Econômicas e Territoriais

INFORMAÇÃO PARA UMA SOCIEDADE MAIS JUSTA

III Conferência Nacional
de Geografia e Cartografia

IV Conferência Nacional
de Estatística

Reunião de Instituições Produtoras
Fórum de Usuários
Seminário "Desafios para Repensar o Trabalho"
Simpósio de Inovações
Jornada de Cursos
Mostra de Tecnologias de Informação

27 a 31 de maio de 1996
Rio de Janeiro, RJ BRASIL

 **IBGE**

60 anos
1936-1996

Uma das maneiras de olhar o ofício de produzir informações sociais, econômicas e territoriais é como arte de descrever o mundo. Estatísticas e mapas transportam os fenômenos da realidade para escalas apropriadas à perspectiva de nossa visão humana e nos permitem pensar e agir à distância, construindo avenidas de mão dupla que juntam o mundo e suas imagens. Maior o poder de síntese dessas representações, combinando, com precisão, elementos dispersos e heterogêneos do cotidiano, maior o nosso conhecimento e a nossa capacidade de compreender e transformar a realidade.

Visto como arte, o ofício de produzir essas informações reflete a cultura de um País e de sua época, como essa cultura vê o mundo e o torna visível, redefinindo o que vê e o que há para se ver.

No cenário de contínua inovação tecnológica e mudança de culturas da sociedade contemporânea, as novas tecnologias de informação - reunindo computadores, telecomunicações e redes de informação - aceleram aquele movimento de mobilização do mundo real. Aumenta a velocidade da acumulação de informação e são ampliados seus requisitos de atualização, formato - mais flexível, personalizado e interativo - e, principalmente, de acessibilidade. A plataforma digital vem se consolidando como o meio mais simples, barato e poderoso para tratar a informação, tornando possíveis novos produtos e serviços e conquistando novos usuários.

Acreditamos ser o ambiente de conversa e controvérsia e de troca entre as diferentes disciplinas, nas mesas redondas e sessões temáticas das Conferências Nacionais de Geografia, Cartografia e Estatística e do Simpósio de Inovações, aquele que melhor ensaja o aprimoramento do consenso sobre os fenômenos a serem mensurados para retratar a sociedade, a economia e o território nacional e sobre as prioridades e formatos das informações necessárias para o fortalecimento da cidadania, a definição de políticas públicas e a gestão político - administrativa do País, e para criar uma sociedade mais justa.

Simon Schwartzman
Coordenador Geral do ENCONTRO

Fundação Instituto Brasileiro de Geografia e Estatística
IBGE

Fundação Instituto Brasileiro de Geografia e Estatística
IBGE

Associação Brasileira de Estudos Popacionais
ABEP

Co-Promoção

Associação Brasileira de Estatística
ABE

Associação Brasileira de Estudos do Trabalho
ABET

Associação Brasileira de Pós-graduação em Saúde Coletiva
ABRASCO

Associação Nacional de Centros de Pós-graduação em Economia
ANPEC

Associação Nacional de Pós-graduação e Pesquisa em Ciências
Sociais

ANPOCS

Associação Nacional de Pós-graduação e Pesquisa em Geografia
ANPEGE

Associação Nacional de Pós-graduação e Pesquisa em
Planejamento Urbano e Regional

ANPUR

Sociedade Brasileira de Cartografia
SBC

Apoio

Federação das Indústrias do Estado do Rio de Janeiro
FIRJAN

Academia Brasileira de Letras
ABL

Conselho Nacional de Pesquisas
CNPq

Financiadora de Estudos e Projetos
FINEP

Revista Ciência Hoje

Institutos Regionais Associados

Companhia do Desenvolvimento do Planalto Central
CODEPLAN (DF)
Empresa Metropolitana de Planejamento da Grande São Paulo S/A
EMPLASA (SP)
Empresa Municipal de Informática e Planejamento S/A
IPLANRIO (RJ)
Fundação Centro de Informações e Dados do Rio de Janeiro
CIDE (RJ)
Fundação de Economia e Estatística
FEE (RS)
Fundação de Planejamento Metropolitano e Regional
METROPLAN (RS)
Fundação Instituto de Planejamento do Ceará
IPLANCE (CE)
Fundação João Pinheiro
FJP (MG)
Fundação Joaquim Nabuco
FUNDAJ (PE)
Fundação Sistema Estadual de Análise de Dados
SEADE (SP)
Instituto Ambiental do Paraná
IAP (PR)
Instituto de Geociências Aplicadas
IGA (MG)
Instituto de Pesquisas Econômicas, Administrativas e Contábeis
IPEAD (MG)
Instituto do Desenvolvimento Econômico Social do Pará
IDESP (PA)
Instituto Geográfico e Cartográfico
IGC (SP)
Instituto de Apoio à Pesquisa e ao Desenvolvimento “Jones dos Santos Neves”
IJSN (ES)
Instituto Paranaense de Desenvolvimento Econômico e Social
IPARDES (PR)
Processamento de Dados do Município de Belo Horizonte S/A
PRODABEL (MG)
Superintendência de Estudos Econômicos e Sociais da Bahia
SEI (BA)

Coordenação Geral

Simon Schwartzman

Comissões de Programa

Confège

César Ajara (IBGE)
Denizar Blitzkow (USP)
Jorge Marques (UFRJ)
Lia Osório Machado (UFRJ)
Mauro Pereira de Mello (IBGE)
Speridião Faissol (UERJ)
Trento Natali Filho (IBGE)

Confest

José A. M. de Carvalho (UFMG)
José Márcio Camargo (PUC)
Lenildo Fernandes Silva (IBGE)
Teresa Cristina N. Araújo (IBGE)
Vilmar Faria (CEBRAP)
Wilton Bussab (FGV)

Comissão Organizadora

Secretaria Executiva - Luisa Maria La Croix

Secretaria Geral - Luciana Kanham

Confège, Confest e Simpósio de Inovações

Anna Lucia Barreto de Freitas, Evangelina X.G. de Oliveira,
Jaime Franklin Vidal Araújo, Lilibeth Cardozo R.Ferreira e
Maria Letícia Duarte Warner

Jornada de Cursos - Carmen Feijó

Finanças - Marise Maria Ferreira

Comunicação Social - Micheline Christophe e Carlos Vieira

Programação Visual - Aldo Victorio Filho e

Luiz Gonzaga C. dos Santos

Infra-Estrutura - Maria Helena Neves Pereira de Souza

Atendimento aos Participantes - Cristina Lins

Apoio

Andrea de Carvalho F. Rodrigues, Carlos Alberto dos Santos,
Delfim Teixeira, Evilmerodac D. da Silva, Gilberto Scheid,
Héctor O. Pravaz, Ivan P. Jordão Junior,

José Augusto dos Santos, Julio da Silva, Katia V. Cavalcanti, Lecy Delfim,
Maria Helena de M. Castro, Regina T. Fonseca,
Rita de Cassia Atualpa Silva e Taisa Sawczuk

Registramos ainda a colaboração de técnicos das diferentes
áreas do IBGE, com seu trabalho, críticas e sugestões para a
consolidação do projeto do ENCONTRO.

CENSUS OF THE YEAR 2000:
A PORTRAIT OF THE UNITED STATES
AS IT ENTERS THE NEXT MILLENNIUM

A Paper Presented at
The Brazilian National Symposium of Producers and
Users of Social, Economic, and Territorial Information

Rio de Janeiro, Brazil
May 27 - 31, 1996

Robert W. Marx
Associate Director for Decennial Census
Bureau of the Census
United States Department of Commerce
Washington, DC 20233-0170

Voice: 301-457-2131
FAX: 301-457-1902
Internet: rmarx@census.gov

THE 2000 DECENNIAL CENSUS PLAN

"Faster, less costly, and more accurate."

From apportioning the Congress to providing the data used by communities, businesses, and Americans everywhere, the decennial census is the cornerstone of our knowledge about our nation. The 2000 decennial census plan is a direct outgrowth of widespread dissatisfaction with the 1990 census—which cost too much and accomplished too little.

Objectives

The overarching goal of the 2000 decennial is to be faster, less costly, and more accurate. But the census must be widely understood and supported if it is to be credible and if it is to improve. The following objectives, therefore, are fundamental to our efforts:

- To make every effort—from simpler, user-friendly forms design to the design of field operations—to count every household
- To implement an open process that diverse groups and interests can understand and support
- To eliminate the "differential undercount" of racial and ethnic groups
- To produce a "one number Census" that is right the first time and that unites us as Americans rather than dividing us as litigants

Strategies

Our plans for the census are built around four fundamental strategies for change.

- *Strategy One: Build Partnership at Every Stage of the Process*

The Census Bureau can't do everything alone: We need to find partners to help us accomplish our objectives. We need to think in

terms of every activity being done by a "best in class" provider. This means:

- *Partnership with state , local , and tribal governments and community groups.* These groups know their local conditions and circumstances better than the Census Bureau ever will. They can help us correct our maps and address lists, tell us where to put our forms so that people will find them, and alert us to other local problems. In contrast with past decennials, we will share our address lists and other local information with these governments, and get their input, early and often.
- *Partnership with the US. Post Office.* In the past, we've spent too much time and money developing address lists that the Post Office already has assembled. This time, we'll use the Post Office list and avoid the costs of duplication.
- *Partnership through privatization.* The Census can't be "world class" in every stage of a process that we manage once every ten years. It needs to outsource some aspects of the process. Some examples are:
 - *Facilities Management:* use data processing companies to manage the facilities where forms are translated into digital files.
 - *Advertising and Promotion:* use private companies to manage our efforts to promote the Census more visibly and effectively.
 - *Human Resources:* use private "temporary" and "manpower" firms to hire and train three hundred thousand-plus temporary workers.
- *Strategy Two: Keep It Simple*

The simpler and easier the decennial is, the more accurate and cheaper it will be. For example:

- *User-friendly forms.* More powerful computers allow us to use forms that are easier to read and fill out. Moreover, in a world in which everybody is deluged with "junk mail," we must make the census form easy to read, pleasing to look at, and simple to fill out. Private designers are already working with us to implement new, "user-friendly" designs that respect the

respondent and that allow people to understand why they're being asked for information.

- *Multiple contacts.* The direct marketing industry has learned that repeated contacts and reminders pay big dividends. So for Census 2000, the first contact with each housing unit will be a letter that alerts the recipient to the census and its benefits. A few days later, the census form will arrive, followed in a few days by a post card thanking those who have participated and encouraging all others to do so. Finally, we'll send another user-friendly questionnaire to most addresses we haven't heard from, with a final message encouraging people to respond.
- *More ways to respond.* In 1990, you had to find your form in the mail. In 2000, the form will find you—we'll put our forms at stores and malls, in civic or community centers, in schools, and other places where people go. And we'll have a well-publicized 800-number and Internet address that you can use if that's convenient.

- *Strategy Three: Use Technology Intelligently*

In 2000, the decennial census will finally enter the Information Age.

- *Digital "capture" of forms.* The 1990 census was microfilmed and keypunched. In 2000, we will scan the forms directly into computers that use "optical character recognition"—software that reads handwriting—to go directly from completed forms to computer files ready for tabulation.
- *"Matching" software.* Sophisticated software allows us to spot duplications—for example, a husband returns a form in the mail while a wife fills one out over the phone at work. This ability will allow us to let the form find you—rather than making you find the form.
- *"Point and click" data tabulation.* People who want data will be able to get it instantly from the decennial data set. "Point and click" computing will allow them to pick the specific information they want, instead of thumbing through thick books that may or may not have what they're looking for.

- *Strategy Four: Use Statistical Methods*

Sampling and statistical estimation are already an integral part of every Census process: the "long form," once received by every household, is now a one-in-six sample. Even in the decennial census, field enumerators who couldn't find a household commonly used such "estimation" techniques as interviewing neighbors or taking the average of neighboring houses for the answers to some questions. The question isn't whether or not to supplement field interviews with estimation—we already do that—but rather how to do so cheaply and accurately. Statisticians agree that incorporating widely-accepted scientific statistical methods into the decennial will produce a better estimate at less cost.

Respondents who need to be reminded to complete mail-in census forms cost six times those who do not. Using field staff to find missing respondents raises the cost to as much as eighteen times those of people who respond by mail. And they still often end up guessing the right answer if the respondent can't be found.

- Thus, after reaching a target of 90 percent response in each and every census district, we will draw a one-in-ten sample of nonrespondents and use it as a basis for completing the count. This will ensure that the census is built around a solid core of field results, while reducing the cost and improving the accuracy of the data on the final increment of the population.
- We'll also take a sample of the population—about one-half percent of the total population—and work them hard to get accurate results, then use them as a basis for checking all our results: the results from the mail-in, from the personal visits to housing units, and the visits to the sample of unresponsive housing units.. This quality control procedure will lead to a "one-number census" and eliminate the need for subsequent "adjustment" of the decennial count.

We are on solid Constitutional grounds. Our proposal will withstand all legal challenges. But we are hesitant to sample a larger share of the population because it changes the political and social nature of the census. Guaranteeing that we'll reach a target of 90 percent of every census district using traditional census-taking methods preserves the census' traditional character.